

Appropriate & Accessible Instructional Materials (AIM)

Accessible instructional materials are instructional materials and print instructional materials that have been formatted or adapted to meet the individual needs of students with disabilities. Appropriate and accessible instructional materials have always been an inherent part of providing students with disabilities a free and appropriate public education (FAPE).

The World Wide Web Consortium (W3C) uses four principles of accessibility to guide their work on accessibility and the internet. While intended for working with the Web, these four principles can also be used as general guides in helping to ensure that all information and instructional materials for students are accessible.



- **Perceivable** - Information and user interface components must be presentable to users in ways they can perceive.
 - This means that users must be able to perceive the information being presented (it can't be invisible to all of their senses)
- **Operable** - User interface components and navigation must be operable.
 - This means that users must be able to operate the interface (the interface cannot require interaction that a user cannot perform)
- **Understandable** - Information and the operation of user interface must be understandable.
 - This means that users must be able to understand the information as well as the operation of the user interface (the content or operation cannot be beyond their understanding)
- **Robust** - Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.
 - This means that users must be able to access the content as technologies advance (as technologies and user agents evolve, the content should remain accessible)

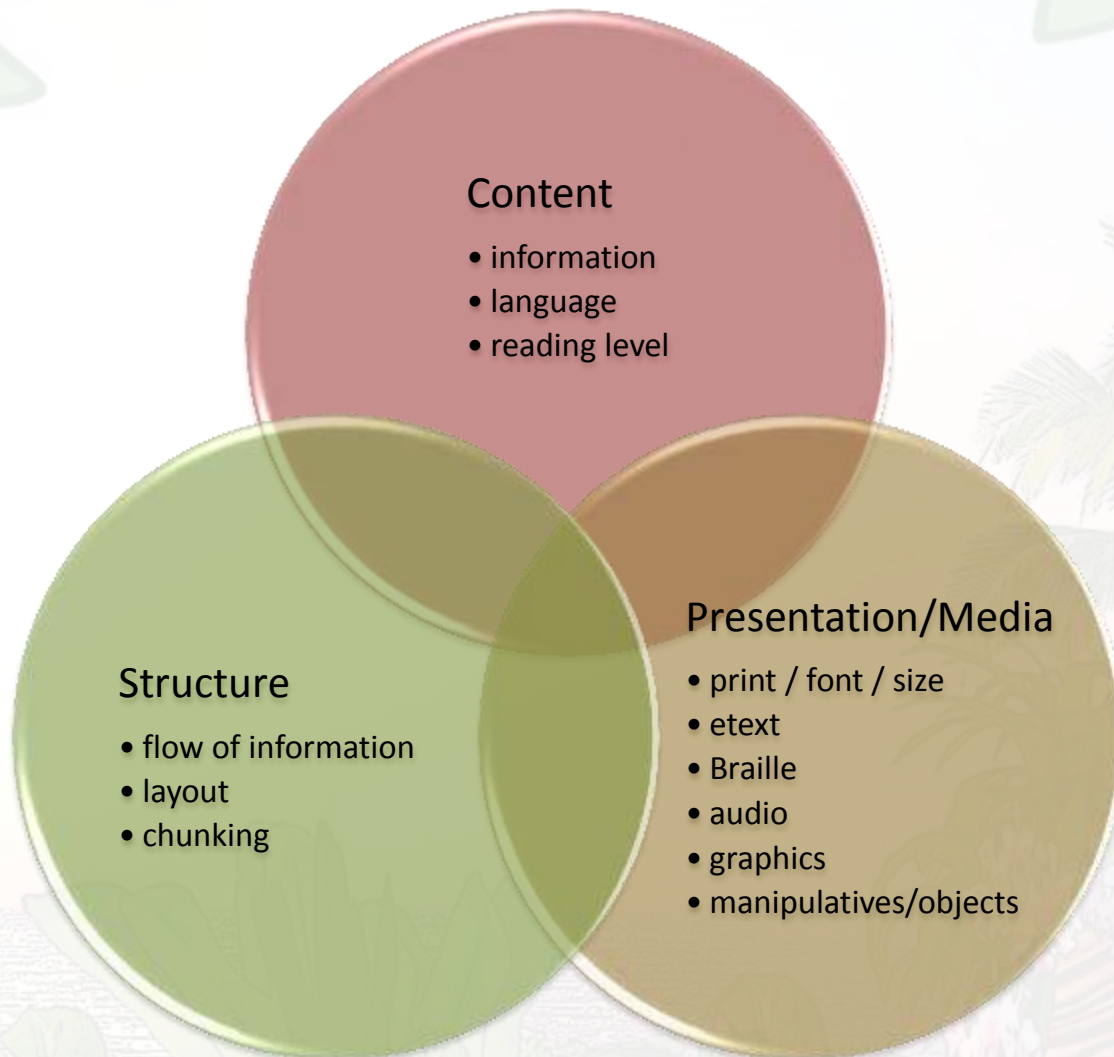
<http://www.w3.org/TR/UNDERSTANDING-WCAG20/intro.html#introduction-fourprincs-head>

So how do these principles help with determining if instructional materials are accessible for a student? Let's look at some examples.

- *Perceivable* – Students must be able to perceive the materials. If a student is blind or visually impaired then braille, audio, or large print may be needed. If a student is deaf or hard of hearing then audio may need text captions.
- *Operable* – Students must be able to operate the instructional materials. If it is a book, the student must be able to physically handle the book and turn the pages, moving from section to section. If it is a math manipulative the student must be able to handle the object.
- *Understandable* – This addresses both the information (content) and the operation of a user interface. First, the information must be understandable. This could include looking at the reading level of the information, the language, and the structure. Second, the user interface must be accessible. If the instructional materials are digital (e.g. digital books, software, cloud applications), the student must be able to understand the interface or at least the part of the interface needed for the instructional activity.

- *Robust* – Students who use assistive technology must be able to use that technology with the instructional materials if appropriate. A student who uses a switch scanning system to control a computer must be able to use that system to control a digital book or instructional cloud application.

To assist in this process, here are three aspects of instructional materials the IEP team may choose to consider when determining what appropriate and accessible instructional materials are needed for a student.



- **Content:** Are the information, language, and grade level appropriate for this student?
- **Structure:** Is the flow of information appropriate for this student? Some students may be unable to handle large chapters of text successfully and need to work with the information in smaller chunks or in an outline form. This can include adapting the layout of the information.
- **Presentation:** Is the sensory aspect of the format appropriate for this student? Does the student need a larger print, an audio file, Braille, graphic enhanced text, or colored overlays?

Current research in the development of math and science skills emphasizes the importance of math and science manipulatives and the cognitive progression from concrete (manipulatives – all grade levels) to representational (images, virtual manipulatives) to abstract (numbers, formulas). When using these types of instructional materials, attention should be paid to the accessibility needs of students with physical and visual disabilities.

When a student needs to work with concrete items, the accessibility needs should be addressed with those types of items. Moving to virtual manipulatives takes a student out of the concrete stage and is not an acceptable accessibility solution for students who need to succeed at the concrete level. Virtual manipulatives are great once a student has mastered the concrete stage. See the “Math” section for information on concrete and virtual manipulatives and the “Science” section for accessibility information for physical labs as well as information on virtual labs.

General Resources

1. AIM Technical Assistance Paper – <http://info.fldoe.org/docushare/dsweb/Get/Document-5764/dps-2010-70.pdf>
2. NIMAS Florida Technical Assistance Paper - <http://info.fldoe.org/docushare/dsweb/Get/Document-5424/dps-2009-084.pdf>
3. National Center on Accessible Instructional Materials - <http://aim.cast.org>
4. AIM Navigator - <http://aim.cast.org/experience/training/navigator> . online tool to facilitate the process of decision-making around accessible instructional materials
5. AIM Explorer - <http://aim.cast.org/experience/training/explorer> . free online simulation to help identify what features will make specialized formats accessible for a student
6. AIM Product Tutorials - <http://aim.cast.org/experience/training/tutorials> . web based videos of a variety of products and services to support accessible instructional materials

Content Resources (adjusting the language and reading level)

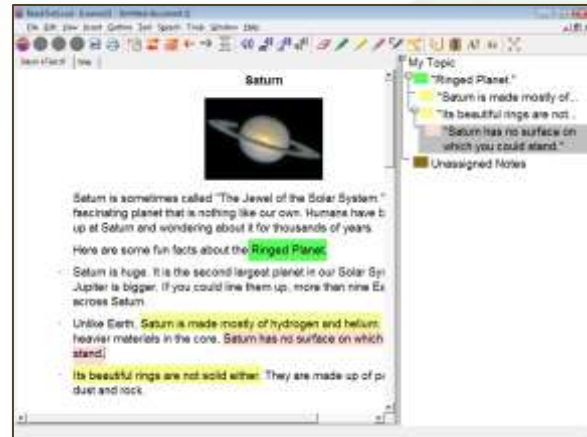
1. Fry's Readability Graph - <http://school.discoveryeducation.com/schrockguide/fry/fry.html> . resources from Kathy Schrock on tools to determine the readability level of a body of text as well as searchable databases on books based on student interest and reading level
2. Readability Calculator - <http://www.standards-schmandards.com/exhibits/rix/index.php> . just paste text to get a reading level
3. Scholastic BookWizard - <http://bookwizard.scholastic.com/tbw/homePage.do> . search engine for scholastic books by interest, reading level, etc.
4. Start-to-Finish Books - http://www.donjohnston.com/products/start_to_finish/index.html . middle and high school (5-12) subjects written at the 1.5 to 5.5 grade reading levels. available in printed books, computer-based books, and audio books
5. Sunlink - <http://www.sunlink.ucf.edu/> . search for books in Florida media centers by a variety of filters, including subject, reading level, and language



Structure Resources (adjusting the complexity of the content)

1. WORD AutoSummarize Tool - http://word.tips.net/Pages/T001809_Creating_an_Executive_Summary.html . Microsoft WORD tool to quickly reduce the amount of text or add visual structure

2. Read:OutLoud - http://www.donjohnston.com/products/read_outloud/index.html . includes highlighting tools that move the highlighted text to a separate area. works with a wide variety of file formats and includes a built in web browser. additional templates to support restructuring text and reading comprehension are available at: http://www.donjohnston.com/downloads/rol_guides/index.html
3. Read and Write Gold 8.1 - <http://www.texthelp.com/> . a suite of tools that float above open programs, allowing it to be used with web browsers, word processors, pdf files, etc.; features include highlight/extraction and autosummarize tools
4. ReadingMadeEZ Talking Word Processor - <http://www.readingmadeez.com/products/TalkingWordProcessor-Features.html> . includes highlight/extraction tools and autosummarize tools
5. Accessible Books - <http://www.setbc.org/setbc/accessiblebooks/> . early reading material (up to grade 3) that has been put in PowerPoint formats or Clicker formats to increase the accessibility of the books
6. Creating PowerPoint Books - <http://atto.buffalo.edu/registered/Tutorials/talkingBooks/powerpoint.php> . instructions and template for making PPT books
7. PowerTalk - <http://fullmeasure.co.uk/PowerTalk/> . an add-on utility to create talking PowerPoint books and presentations



Media Resources (adjusting the presentation)

1. Accessible Book Collection - <http://accessiblebookcollection.org/> . a digital book resource
2. Page by Page Books - <http://www.pagebypagebooks.com/> . classic books online and ready to use
3. Disney Digital Books - <http://disneydigitalbooks.go.com/> . online books with the magic of Disney
4. Lit 2 Go - <http://etc.usf.edu/lit2go/> . collection of literature in mp3 format
5. Florida Electronic Library - <http://www.flelibrary.org/> . digital magazines, newspapers, encyclopedias, and books
6. Learning Through Listening - <http://www.rfbd.org/> . accessible audio book library for qualifying students with disabilities



7. Bookshare.org - <http://www.bookshare.org/web/Welcome.html> - free digital library for all qualifying students in the U.S.
8. Tar Hill Reader - <http://tarheelreader.org/> . collection of free, beginning reader accessible books
9. OmniPage - <http://www.nuance.com/products/index.htm> . OmniPage includes OCR software for scanning printed materials into digital formats as well as scanning printed forms into fill-able digital forms
10. Intel Reader – <http://www.donjohnston.com/intelreader> . high resolution camera that converts printed text to digital text and then reads it aloud
11. Signing Savvy - <http://www.signingsavvy.com/> . similar to the ASL Browser with the additional feature of being able to select large videos (when signed in)
12. ASL eCards - <http://deafresources.com/card/> . send an ecard with ASL
13. Braille and ASL Fonts - <http://www.clickinks.com/Fonts-for-Disabilities-Braille-and-Sign-Language.html> . free downloads of fonts



14. Boardmaker Sign Language Symbols - <http://store.mayer-johnson.com/us/pcs-sign-language-symbols.html> . develop ASL materials with Boardmaker

15. Sign Language & Deafness - http://www.fsdb.k12.fl.us/rmc/deaf/deaf_sign.html . extensive collection of activities and resources related to deafness

16. RMTCC Captioning Center - <http://www.fsdb.k12.fl.us/rmc/services/caption.html> . Florida resource for captioned instructional videos

Digital Book / Daisy Book Players (digital text/audio books with navigation options)

1. gh Player and example Daisy Books - <http://www.gh-accessibility.com/store/download.php>
2. AMIS Free Reader - <http://www.daisy.org/projects/amis/index.php>
3. EasyReader - <http://www.yourdolphins.com/productdetail.asp?id=9>
4. Victor Readers (Stream, Wave) - http://www.humanware.com/en-usa/products/blindness/dtb_players/compact_models
5. Victor Readers Classic - http://www.humanware.com/en-usa/products/blindness/dtb_players/classic_models
6. Classmate Reader - <http://www.donjohnston.com/products/portables/classmate/index.html>



IDEA 2004 established the National Instructional Materials Accessibility Standard (**NIMAS**) and requires LEAs to provide accessible materials to students who qualify as being print disabled due to a visual, physical, or organic based reading disability. Through this system core curriculum textbooks are available in specialized formats (Braille, audio, digital etext, large print). For more information in Florida visit NIMAS/Florida at <http://www.fimcvi.org/>

Students with disabilities who do not qualify for NIMAS related services must still be provided accessible instructional materials under IDEA 2004. Options include requesting unlocked, accessible digital textbooks as needed from the current publishers, using scanning technology, and using a digital text library/resource.

